DR. BABASAHEB AMBEDKAR TECHNOLOGICAL UNIVERSITY, LONERE

End Semester Examination – Winter 2022

Date: 03/01/2023

Course : B. Pharmacy | Sem: VII

Subject Name : Instrumental Methods of Analysis | Subject Code: BP701T

Max Marks : 75 | Duration : 3 Hr.

Instructions:

1. All questions are compulsory
2. Draw diagrams / figures wherever necessary
3. Figures to right indicate full marks

Q. 1. Answer following questions. **(10 x 2) = 20**

i) Write the electronic transitions for the following molecules.
a) 1-3 butadiene b) acetaldehyde

ii) Differentiate between singlet and triplet state.

iii) Differentiate between single component and multicomponent analysis.

iv) The compound A had travelled distance 5 cm, compound B distance travelled 7 cm on TLC plate. The solvent front distance was 10 cm. Calculate the Rf value for compound A and B?

v) What is quenching. Enlist its types.

vi) Draw a diagram of single beam and double beam UV-Visible spectrophotometer.

vii) Differentiate between normal phase and reversed phase chromatography.

viii) Define with example: auxochrome, chromophore.

ix) Why derivatization techniques required in gas chromatography? Enlist derivatization methods used in GC.

x) Calculate the concentration of compound in an ethanolic solution of which the absorbance in a 1cm cell at its λmax 241 nm, was found to be 0.890. The A (1%, 1cm) of compound D is 540 at 241nm.

Q. 2. Answer the following questions (any two) **(2 x 10) = 20**

i) Explain principle, instrumentation and applications of High performance Liquid Chromatography (HPLC).

ii) Explain principle, instrumentation and applications of Gas Chromatography.

iii) Explain the principle, instrumentation and applications of IR spectroscopy.

Q. 3. Answer the following questions (any seven) **(7 x 5) = 35**

i) Distinguish between fluorescence and phosphorescence. Explain factors affecting fluorescence.

ii) Discuss principle, instrumentation and applications of Gel chromatography.

iii) Define Chromatography. Classify chromatographic methods with examples.

iv) Explain the principle of Affinity Chromatography.

v) Differentiate paper chromatography against TLC with respect to principle and applications.

vi) Differentiate principle and applications of gel electrophoresis against capillary electrophoresis.

vii) Differentiate principle and application of nephelometry against turbidimetery.

viii) Write principle, types and applications of Ion Exchange Chromatography..

ix) Explain principle, instrumentation and applications of Atomic Absorption spectroscopy.

——END OF THE PAPER——

DR. BABASAHEB AMBEDKAR TECHNOLOGICAL UNIVERSITY, LONERE

End Semester Examination – Winter 2022

Date: 05.01.2023

Course	:	B. Pharmacy	**Semester:**		VII
Subject Name	:	Industrial Pharmacy II	**Subject Code**	:	BP702T
Max Marks	:	75	**Duration**	:	3 Hr.

Instructions:

1. **All questions are compulsory**
2. **Draw diagrams / figures wherever necessary**
3. **Figures to right indicate full marks**

Q. 1. Objective Type Questions (Answer all the questions) **(10 x 2) = 20**

i) Describe IND. Give types of IND application.

ii) Enlist the steps involved in clinical research process.

iii) Enlist Technology Transfer Team members with their role.

iv) Discuss reasons behind creation of GLP.

v) Differentiate between ISO 9001 & ISO 14001 Series.

vi) Compile objectives of pilot plant scale up in Pharmaceutical Industry.

vii) Enlist the responsibilities of CDSCO.

viii) Highlight benefits of QMS implementation at Pharma space.

ix) Enlist the contents of IB.

x) Define Technology Transfer (TT). Illustrate in brief the need of TT in pharmaceuticals?

Q. 2. Long Answers (Answer 2 out of 3) **(2 x 10) = 20**

i) Discuss general/GMP considerations and importance of pilot plant scale up. Elaborate pilot plant scale up for Tablet manufacturing with CQAs.

ii) Explain the need and objectives of regulatory requirements for drug approvals. Discuss NDA & ANDA application process in detail.

iii) Elaborate the concept of Total Quality Management in Pharma Industry with historical background and benefits of implementation at Pharma space.

Q. 3. Short Answers (Answer 7 out of 9) **(7 x 5) = 35**

i) Summarize organization and responsibilities of CDSCO.

ii) Comment on QRM in Pharmaceuticals with its process.

iii) Elaborate Six Sigma concept in detail.

iv) Summarize clinical research protocol in short.

v) Explain QbD in pharmaceuticals.

vi) Illustrate the significance of personnel requirements, space requirements and raw materials in Pilot plant scale up techniques.

vii) Illustrate scope, significance, content and procedure for issuance of CoPP.

viii) Explain role & responsibilities of Regulatory Affair Expert.

ix) Enlist and explain Tech Transfer agencies in India.

-----END OF THE PAPER-----

DR. BABASAHEB AMBEDKAR TECHNOLOGICAL UNIVERSITY, LONERE

End Semester Examination winter 2022

Course: B. Pharmacy **Semester: - VII**

Subject Name: Pharmacy Practice **Subject Code: BP703T**

Max. Marks: 75 **Date: 07/01/2023** **Duration: 3 Hrs.**

Instructions –

1. **All questions are compulsory**
2. **Answers to MCQs should be written in full sentences**
3. **Draw diagrams / figures wherever necessary**
4. **Figures to right indicate full marks**

Q. 1. Objective Type Questions (Answer all the questions) **(10 x 2) = 20**

1) Draw a neat, labeled diagram of drug store layout
2) What is medication non-adherence?
3) List any four drugs for TDM.
4) Importance of patient counseling.
5) Define prescribed medication order.
6) Define budget
7) Write formula to calculate EOQ?
8) What is an investigational drug?
9) Give the normal range of: RBC, ESR.
10) Define automatic stop order for dangerous drugs.

Q. 2. Long Answers) (Answer 2 out of 3) **(2 x 10) = 20**

1) Define hospital pharmacy. What are the roles and responsibilities of hospital pharmacist in the various areas of a hospital?
2) Write the organizational structure and functions of P&T committee.
3) Define TDM. Write the factors to be considered during Therapeutic Drug Monitoring.

Q. 3. Short Answers (Answer 7 out of 9) **(7 x 5) = 35**

1) Define Adverse Drug Reaction. Write the classification of ADR with examples.
2) Define patient counselling. Explain in detail steps involved in patient counselling.
3) Write a note on drug information services. Write the source of drug information.
4) Explain the term 'Inventory control'. Describe in detail about ABC technique of Inventory control with its advantages.
5) Discuss about drug distribution methods for Inpatients.
6) Define OTC drugs with examples. Give the advantages and disadvantages of OTC drugs.
7) Define hospital formulary. Explain in detail the contents of hospital formulary.
8) Discuss the haematology parameters and its interpretation
9) Define community pharmacy. Explain the role of community pharmacist.

------ END OF THE PAPER ------

DR. BABASAHEB AMBEDKAR TECHNOLOGICAL UNIVERSITY, LONERE

End Semester Examination – Winter-2022

Date: 09/01/2023

Course: B. Pharmacy | **Sem: VII**

Subject Name: Novel Drug Delivery System | **Subject Code: BP704T**

Max Marks: 75 | **Duration: 3Hrs**

Instructions –

1. **All questions are compulsory**
2. **Draw diagrams/figures wherever necessary**
3. **Figures to right indicate full marks**

Q. 1. Objective Type Questions (Answer all the questions) **(10 x 2) = 20**

i) What are ideal characters of polymers?
ii) Give types of ocular inserts.
iii) Write factors affecting formulation of Controlled release drug delivery systems.
iv) Enlist advantages of implantable drug delivery system.
v) Write the methods of microencapsulation.
vi) Name the Marketed products of Transdermal Patches.
vii) Give the types of medicated IUD's.
viii) Write the different approaches for gastric retention.
ix) Give examples of chemical penetration enhancers.
x) Give the disadvantages of copper intrauterine devices.

Q. 2. Long Answers (Answer 2 out of 3) **(2 x 10) = 20**

i) What is Gastro retentive Drug Delivery System? Give its advantages & disadvantages with approaches for GRDDS.
ii) Define Transdermal drug delivery system (TDDS)? Give its advantages and disadvantages. Describe permeation enhancer with examples.
iii) What is Nasal DDS? Give its advantages & disadvantages with formulation of Nasal Sprays.

Q. 3. Short Answers (Answer 7 out of 9) **(7 x 5) = 35**

i) Biopharmaceutic Characteristics of Drug to qualify for CDDS.
ii) Explain the Theories of Mucoadhesion.
iii) Write the challenges in delivering drug to the eye.
iv) Explain about Microballoons as gastro adhesive drug delivery system.
v) Explain concept, advantages and disadvantages of liposomes.
vi) State various methods to prepare nanoparticles.
vii) Describe the formulations of nasal sprays.
viii) Describe intrauterine drug delivery system with applications
ix) Write a note on Non-Effervescent Systems for FDDS.

------END OF THE PAPER------